

CLAIMS

1. A lithographic apparatus comprising:
an illumination system configured to provide a beam of radiation;
a mask table configured to hold a mask, the mask configured to impart the beam with a pattern, said mask table being adapted to receive said mask at at least two positions displaced in a first direction so that different parts of the pattern on the mask can be brought within an exposure field when the mask is in different ones of said positions;
a substrate table configured to hold a substrate; and
a projection system configured to project the patterned beam onto a target portion of the substrate, wherein said exposure field of said projection system is smaller than said mask in at least the first direction.
2. Apparatus according to claim 1, further comprises a mask handling device configured to place said mask on said mask table selectively in different ones of said positions.
3. Apparatus according to claim 1, wherein the distance between the center of said mask when in the first position and the center of said mask when in the second position is substantially equal to the length of said exposure field in said first direction.
4. Apparatus according to claim 3, wherein said distance is slightly less than said length to provide an overlap of the exposures necessary to image the whole pattern.
5. Apparatus according to claim 1, wherein said mask table is adapted to accommodate the mask in N positions to allow imaging of a pattern up to N times the length of the exposure field in the first direction, where N is in the range of from 2 to 5.
6. Apparatus according to claim 1, wherein said mask table is adapted to accommodate the mask at a large number or continuum of positions in the first direction.

7. Apparatus according to claim 6, wherein said mask table comprises a mask clamp to clamp the mask along its edges parallel to the first direction.
8. Apparatus according to claim 1, further comprising a fine positioning actuator adapted to make fine adjustments of the position of the mask table in at least said first direction.
9. Apparatus according to claim 1, further comprising a long stroke drive unit adapted to scan said mask table during an exposure in a second direction that is substantially perpendicular to said first direction.
10. Apparatus according to claim 1, wherein said mask table comprises a mask clamp to clamp the mask along its edges parallel to a scanning direction.
11. A device manufacturing method comprising:
 - using a mask to impart a beam of radiation with a pattern, wherein said mask is positioned on a mask table at a first position to image a first portion of the pattern of said mask and is subsequently positioned on said mask table at a second position to image a second portion of said pattern; and
 - projecting the patterned beam of radiation onto a target portion of a substrate.
12. A method according to claim 11 for imaging a plurality of copies of the same pattern onto a substrate, wherein the first portions of each copy are imaged first, then the mask is positioned at said second position and then said second portions of each copy are imaged.
13. A method according to claim 11 for imaging a plurality of copies of the same pattern onto a substrate, wherein the first portion of a first copy is imaged onto said substrate, said mask is positioned at said second position and then the second portion of said first copy is imaged before the first portion of a second copy is imaged.

14. A method according to claim 11, comprising placing said mask on said mask table selectively in different ones of said positions using a mask handling device.
15. A method according to claim 11, wherein the distance between the center of said mask when in the first position and the center of said mask when in the second position is substantially equal to the length of an exposure field when projecting said patterned beam.
16. A method according to claim 15, wherein said distance is slightly less than said length to provide an overlap of the exposures necessary to image the whole pattern.
17. A method according to claim 11, wherein said mask table is adapted to accommodate the mask in N positions to allow imaging of a pattern up to N times the length of the exposure field, where N is in the range of from 2 to 5.
18. A method according to claim 11, wherein said mask table is adapted to accommodate the mask at a large number or continuum of positions.
19. A method according to claim 18, wherein said mask table comprises mask clamps to clamp the mask along its edges parallel to a direction substantially perpendicular to a scanning direction.
20. A method according to claim 11, further comprising finely positioning said mask table in a direction substantially perpendicular to a scanning direction.
21. A method according to claim 11, further comprising positioning said mask table in a scanning direction during an exposure.
22. A method according to claim 11, wherein said mask table comprises a mask clamp to clamp the mask along its edges parallel to a scanning direction.